

See inside of back cover  
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# HEALTH STATISTICS

*FROM THE U. S. NATIONAL HEALTH SURVEY*

Hernias  
reported in interviews

United States  
July 1957 - June 1959

Statistics on prevalence of hernias and associated disability by age, sex, and medical care status. Based on data collected in household interviews during the period July 1957-June 1959.

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
Arthur S. Flemming, Secretary

Public Health Service  
Leroy E. Burney, Surgeon General

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The U. S. National Health Survey is a continuing program under which the Public Health Service makes studies to determine the extent of illness and disability in the population of the United States and to gather related information. It is authorized by Public Law 652, 84th Congress.

## CO-OPERATION OF THE BUREAU OF THE CENSUS

Under the legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies. For the Health Interview Survey the Bureau of the Census designed and selected the sample, conducted the household interviews, and processed the data in accordance with specifications established by the Public Health Service.

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**SYMBOLS AND NOTES**

Data not available (three dashes)----- ---

Category not applicable (three dots)----- ...

Quantity is zero (1 dash)----- -

Magnitude greater than zero but less than  
one-half of the unit used----- 0 or 0.0

NOTE: Due to rounding, detailed figures within  
tables may not add to totals

# HERNIAS

This report from the U. S. National Health Survey contains estimates of the number of persons with hernias and the disability resulting from this condition. Earlier reports from the survey have given estimates of chronic respiratory conditions, heart disease and high blood pressure, peptic ulcers, arthritis and rheumatism, and diabetes. Descriptions of these publications dealing with chronic conditions as well as other publications from the Survey are shown on the inside back cover of this report.

It should be noted that the estimate of the national prevalence of hernias shown in this report, 14.9 cases per 1,000 population, is based on cases reported in household interviews. Thus, it includes only cases which the respondents are aware of, and which have given them some concern. In general, these are likely to be cases in which the hernia is visible, has caused discomfort, or has been detected by a physician on physical examination. No doubt a higher prevalence rate would be obtained if physical examinations for hernia were carried out on a representative sample of the National population. A general idea of the magnitude of a prevalence rate for hernia based on clinical data can be obtained from the evaluation phase of studies conducted by the Commission on Chronic Illness in the City of Baltimore<sup>1</sup> and in Hunterdon County<sup>2</sup> during 1952-53. From a clinical follow-up examination of 809 persons interviewed in Baltimore during the study, an estimate of 36.6 cases of hernia per 1,000 persons evaluated was obtained. A similar evaluation of 846 persons residing in rural areas of Hunterdon County produced a rate of 38.0 cases of hernia per 1,000 persons evaluated. While these studies were restricted to particular areas and were not necessarily representative of the total population of the country, the rates indicate roughly the difference in prevalence rates of hernias that might be obtained from data based on clinical examinations as compared with data from household interviews.

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This report was prepared by Augustine Gentile  
of the U.S. National Health Survey staff.

Another point worth noting is that the accuracy of diagnostic information obtained from household respondents for certain kinds of illnesses may be questionable. This is especially true for conditions which have not been medically attended and consequently have not been diagnosed by a physician. However, since about 90 percent of the respondents reported that they had received medical attention for their hernias, it is likely that the respondents were able to report accurately the general term "hernia" or "rupture." No effort was made to determine the specific type of hernia, since it was believed that most respondents would not be able to provide such information. Hence, in this report all forms of hernia are grouped together.

## SOURCE OF DATA

The material presented in this report is derived from health data obtained for approximately 235,000 persons who were included in the 73,000 household interviews conducted by the U. S. National Health Survey during the period July 1, 1957-June 28, 1959. The data are obtained from 2 years of continuous interviewing of a sample of the civilian noninstitutional population of the United States. The sampling procedures are such that the estimates shown represent the average prevalence of reported hernias for the population and period covered.

A description of the statistical design of the survey, the methods used in estimation, and the general qualifications of data obtained from surveys is presented in Appendix I. Since all estimates presented in this report are based on a sample of approximately 1/750th of the population rather than on the entire population, they are subject to sampling errors and particular attention should be paid to the section entitled "Reliability of Estimates" which includes tables of sampling errors and instructions for their use.

Definitions of certain terms used in this report are given in Appendix II. Many of the terms have specialized meanings for the purposes of the survey; thus, familiarity with these defini-

tions will assist the reader in interpreting the material.

The questionnaire which was used during the year July 1958-June 1959 is reproduced as Appendix III. Those sections which apply to this report include questions 11-16 and table I. The interviewer was instructed to ask these questions of each adult who was home at the time of her call. For adults not at home and for children under the age of 18, the wife, parent, or other responsible member of the family, living in the same household, was an eligible respondent. Lodgers and similar unrelated members of the household were asked to answer all questions for themselves, even if this involved additional calls for the interviewer.

## PREVALENCE OF HERNIAS

Conditions codable to numbers 560 and 561 of the International Classification of Diseases, 1955 Revision are included as hernias in this report. It is recognized that for specific types of hernias the rate of occurrence among age and sex groups as well as the amount of disability would show large variations according to the type. However, since most household respondents cannot report in terms of a specific type of hernia (i.e., inguinal, femoral, umbilical, diaphragmatic, etc.), it was necessary to group together all types of hernias in this report.

In the National Health Survey, prevalence estimates for the various chronic conditions are based on all cases reported to be present at any time during the 12-month period prior to interview. This assumes that a chronic condition present at some time during the past year still exists at time of interview. For most chronic conditions, such as diabetes, heart disease, and arthritis, this procedure does not result in any appreciable overestimation of the prevalence. However, for remediable conditions, such as hernia, diseases of the gallbladder, and hemorrhoids, the inclusion of cases which had been present during the year, but had been corrected by surgery or other treatment prior to the time of interview, may inflate the average prevalence of the condition to some degree.

The over-all prevalence rate for hernias is shown here as 14.9 per 1,000 population. It is interesting to note that in two other household surveys conducted in recent years similar rates were obtained. In the Kansas City Metropolitan Area Health Survey<sup>3</sup> (1953-54) the rate was 16.5 per 1,000 population. The rate obtained in the California Health Survey<sup>4</sup> (1954-55) was 14.9 per 1,000 population.

About 75 percent of all reported hernias occurred among males, and the rates for males

were higher than those for females in every age group as shown by the data presented in table 1 and figure 1. The data also show that for both males and females the prevalence rates increase for successively older age groups.

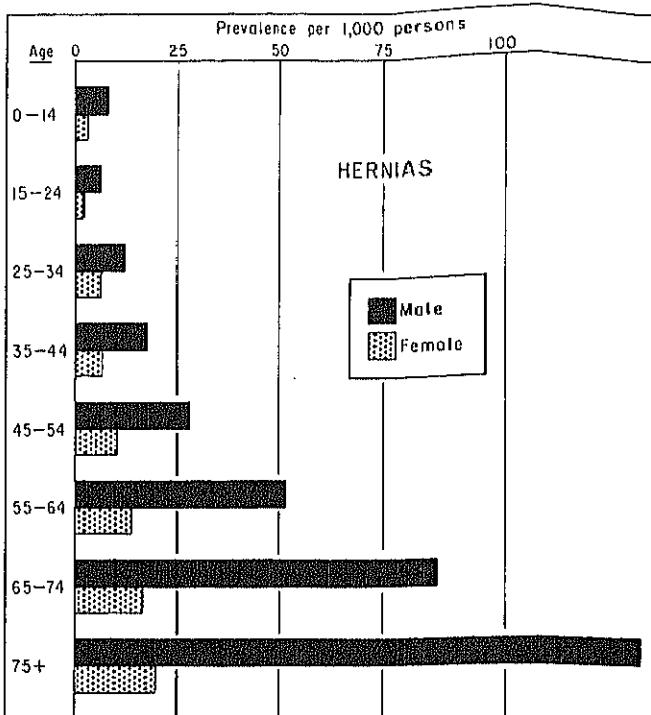


Figure 1. Prevalence of hernias per 1,000 population by sex and age.

Of the total number of hernia cases (2,539,000) about 90 percent were reported as having been attended by a physician at some time. The remaining 10 percent may include some persons who were erroneously reported as not having been attended by a physician, because of lack of knowledge by the respondent. However, a portion of the 10 percent may also be persons who, without the benefit of medical consultation, merely believe that they have hernias. Among the 2,272,000 cases reported as medically attended 870,000, or approximately 38 percent, were reported as still being under care (i.e., "taking treatment or following advice given by a physician"). These proportions were about the same for both of the sexes (tables 1 and A).

A rough measure of the severity of the reported hernia cases may be obtained from table 2, which shows that the number of persons who had one or more days of bed disability during the year because of the hernia condition amounted to 22 percent of all persons with hernias. A later section will deal with hospitalized cases of her-

Table A. Average prevalence of hernias and percent distribution by medical care status according to sex: United States, July 1957-June 1959

Sex	Total cases of hernias	Medically attended cases		Percent of cases that were medically attended	Percent of medically attended cases that were under care
		Total	Under care		
	(Average number in thousands)				
Both sexes-----	2,539	2,272	870	89.5	38.3
Male-----	1,916	1,693	673	88.4	39.8
Female-----	623	579	197	92.9	34.0

nias. However, it may be of interest to point out here that the data in table 2 show that 549,000 persons had one or more days of bed disability during the year; other survey data indicate that about 450,000 persons a year were hospitalized for a hernia condition. Since by definition a hospital day is also a bed-day, it appears on the basis of these data that a high proportion of the persons who reported one or more days of bed disability were persons hospitalized for their condition. The inference that may be drawn is that relatively few of the nonhospitalized hernia cases were severe enough to cause bed disability.

## DISABILITY DUE TO HERNIAS

Data on two basic types of disability associated with hernias are mentioned in this report. One type refers to long-term disability and is described as chronic limitation of activity. The other type of disability refers to short-term disability, and is described in terms of the number of restricted-activity days, bed-days, and work-loss days.

### Limitation of Activity

In answer to questions about limitation of activity (see Appendix III, cards C-F) 79 percent of the persons with hernias reported that they were not limited in any of the specified ways because of the condition.

The percentage of males with hernia who had no limitation of activity due to the condition was not significantly different from that for females.

Approximately 95 percent of the children under 15 years of age reported as having a her-

nia had no limitation of activity due to the condition. This high proportion may be due in part to the high prevalence of umbilical hernia among children, particularly among infants for whom the concept of activity limitation has little meaning.

### Disability Days

As indicated earlier, three types of disability days are used in this report to describe the impact of hernia on a person's ability to carry out his normal activities. The most inclusive of these is a restricted-activity day—by definition, a day on which a person had to reduce his usual activities for the entire day. A day of bed disability, or simply a bed-day, is a day on which a person had to stay in bed all or most of the day because of illness. Days spent in a hospital as an inpatient (whether the person was actually in bed or not), are also counted as bed-days. A work-loss day is a day on which a person would have been at work if he had not been ill. Work-loss days are counted only for persons 17 years of age and over. Bed-days and work-loss days are of course also included as restricted-activity days.

### Restricted-Activity Days

Approximately 40 million days of restricted activity per year were attributed to hernias. On the average each person with a hernia had 15.6 days of restricted activity due to the condition. Although females accounted for only 25 percent of the hernia cases, they accounted for 35 percent of the restricted-activity days. This is reflected in the average number of restricted-activity days per person with a hernia; for females this rate was 22.3 days while males with hernias were restricted on the average of 13.4 days (table 4 and fig. 2).

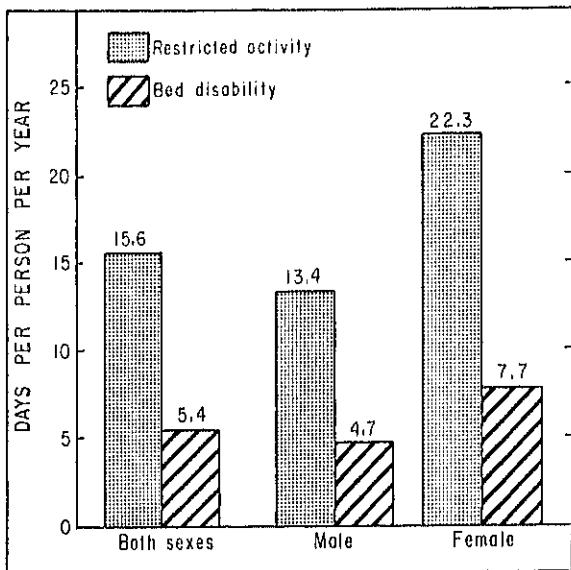


Figure 2. Average number of disability days per year per person with hernia by sex.

#### Bed-Days

About 35 percent (13.8 million) of the total of 40 million restricted-activity days were bed-days. This represents an average of 5.4 days per person with a hernia per year. Again the average number of bed-days per case for females (7.7 days) was higher than that for males (4.7 days) (table 4 and fig. 2).

Another measure of the impact of hernias can be obtained from the average number of bed-days due to hernias for persons who had one or more days of bed disability. This is shown in table B and the average of 25.1 days indicates that when a hernia condition causes any bed disability at all it causes an extensive period of disability.

Table B. Average number of bed-days per year per person with a hernia and per person with one or more bed-days attributable to a hernia by sex: United States, July 1957-June 1959

Sex	Bed-days per year	
	Per person with a hernia	Per person with one or more bed-days due to a hernia
Both sexes--	5.4	25.1
Male-----	4.7	22.1
Female-----	7.7	33.2

#### Work-Loss Days

The total number of work-loss days attributable to hernias is shown in table 5 to be approximately 10 million days. Persons who reported their major activity as "usually working" accounted for about 9 of the 10 million days. Most of the work-loss days occurred among males. Also shown are the average number of work-loss days per year for each person with a hernia and a similar average is shown for "usually working" persons with hernias. These averages were 4.7 and 7.7 days, respectively.

#### HOSPITALIZATION

The importance of hernias as a cause for hospitalization is indicated by the fact that about 3.4 percent of all persons discharged from short-stay hospitals had been hospitalized for a hernia condition. For males the proportion of hernia patients was 6.1 percent of all hospital patients. These estimates, as well as those that follow on hospitalization for hernias, were taken from the National Health Survey report entitled Hospitalization, Series B-No. 7.

According to data collected by the National Health Survey, 453,000 persons who had been hospitalized for a hernia condition were discharged from short-stay hospitals during the year July 1957-June 1958. These persons spent approximately 4 million days in the hospital. During the same period, about 450,000 operations were performed for repair of hernias. These operations accounted for about 7 percent of all the nonobstetrical surgery performed. Among males, operations for repair of hernias accounted for 12 percent of all operations, and this was the second most frequent type of operation; only tonsillectomies, which are usually performed on children, occurred more frequently.

#### References

<sup>1</sup>Commission on Chronic Illness in 1953-54: Chronic Illness in a Large City: The Baltimore Study (Chronic Illness in the United States, Vol. IV). Harvard University Press, Cambridge, Mass., 1957.

<sup>2</sup>Commission on Chronic Illness: Chronic Illness in a Rural Area: The Hunterdon Study (Chronic Illness in the United States, Vol. III). Harvard University Press, Cambridge, Mass., 1959.

<sup>3</sup>Peterson, W. A.: Kansas City Metropolitan Area Health Survey. Community Studies, Inc., Kansas City, Mo., 1959.

<sup>4</sup>State of California, Department of Public Health, Health in California, California State Printing Office, Sacramento, Calif.

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Table 1. Average prevalence of hernias and the average prevalence per 1,000 population as reported in interviews by sex, age, and medical attention: United States, July 1957-June 1959

[Data are based on household interviews of the civilian noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II. Detailed figures may not add to totals due to rounding]

Sex and age	Total	Medically attended cases		Total	Medically attended cases	
		Total	Under care		Total	Under care
		Average number in thousands			Average number per 1,000 population	
<u>Both sexes</u>						
All ages-----	2,539	2,272	870	14.9	13.4	5.1
0-14-----	301	292	54	5.6	5.5	1.0
15-24-----	88	80	19	4.1	3.7	0.9
25-34-----	213	195	63	9.4	8.6	2.8
35-44-----	279	265	96	12.1	11.5	4.2
45-54-----	376	338	124	19.0	17.0	6.3
55-64-----	481	417	174	32.2	27.9	11.7
65-74-----	480	421	195	49.5	43.4	20.1
75+-----	321	263	145	64.6	52.9	29.2
<u>Male</u>						
All ages-----	1,916	1,693	673	23.2	20.5	8.1
0-14-----	222	216	40	8.2	7.9	1.5
15-24-----	64	57	14	6.4	5.7	1.4
25-34-----	134	118	43	12.4	10.9	4.0
35-44-----	196	185	63	17.7	16.7	5.7
45-54-----	272	240	95	28.1	24.8	9.8
55-64-----	372	319	135	51.8	44.4	18.8
65-74-----	392	339	158	86.5	74.8	34.9
75+-----	265	219	125	122.9	101.5	58.0
<u>Female</u>						
All ages-----	623	579	197	7.1	6.6	2.3
0-14-----	79	76	14	3.0	2.9	0.5
15-24-----	24	23	5	2.1	2.0	0.4
25-34-----	79	77	20	6.7	6.5	1.7
35-44-----	83	80	33	6.9	6.7	2.8
45-54-----	104	98	29	10.2	9.6	2.9
55-64-----	109	98	39	14.1	12.7	5.0
65-74-----	88	82	37	17.0	15.9	7.2
75+-----	56	44	20	19.9	15.6	7.1

Table 2. Average number and percent distribution of persons with hernias according to bed disability *as reported in interviews* by sex and age: United States, July 1957-June 1959

[Data are based on household interviews of the civilian noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II. Detailed figures may not add to totals due to rounding]

Sex and age	Total	With no bed-disability days in year	With 1+ bed-disability days in year	Total	With no bed-disability days in year	With 1+ bed-disability days in year
<u>Both sexes</u>		Average number of persons in thousands		Percent distribution		
All ages-----	2,539	1,990	549	100.0	78.4'	21.6
0-14-----	301	176	125	100.0	58.5	41.5
15-24-----	88	64	24	100.0	72.7	27.3
25-34-----	213	168	45	100.0	78.9	21.1
35-44-----	279	202	77	100.0	72.4	27.6
45-54-----	376	288	88	100.0	76.6	23.4
55-64-----	481	387	94	100.0	80.5	19.5
65-74-----	480	411	68	100.0	85.6	14.2
75+-----	321	294	27	100.0	91.6	8.4
<u>Male</u>						
All ages-----	1,916	1,512	405	100.0	78.9	21.1
0-14-----	222	114	108	100.0	51.4	48.6
15-24-----	64	45	19	100.0	70.3	29.7
25-34-----	134	106	28	100.0	79.1	20.9
35-44-----	196	146	50	100.0	74.5	25.5
45-54-----	272	210	62	100.0	77.2	22.8
55-64-----	372	301	71	100.0	80.9	19.1
65-74-----	392	346	47	100.0	88.3	12.0
75+-----	265	245	20	100.0	92.5	7.5
<u>Female*</u>						
All ages-----	623	478	145	100.0	76.7	23.3

\* The magnitude of the sampling error is too great to permit showing separate estimates by age for females.

Table 3. Average number of persons with hernias and number and percent with no activity limitation due to hernias as reported in interviews by sex and age: United States, July 1957-June 1959

[Data are based on household interviews of the civilian noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II. Detailed figures may not add to totals due to rounding]

Sex and age	Number of persons with hernias		Percent with no activity limitation
	Total	With no activity limitation	
<u>Both sexes</u>		Average number of persons in thousands	
All ages-----	2,539	2,004	78.9
0-14-----	301	287	95.3
15-24-----	88	64	72.7
25-34-----	213	175	82.2
35-44-----	279	227	81.4
45-54-----	376	297	79.0
55-64-----	481	372	77.3
65-74-----	480	344	71.7
75+-----	321	238	74.1
<u>Male</u>			
All ages-----	1,916	1,530	79.9
0-14-----	222	212	95.5
15-24-----	64	46	71.9
25-34-----	134	109	81.3
35-44-----	196	161	82.1
45-54-----	272	215	79.0
55-64-----	372	295	79.3
65-74-----	392	287	73.2
75+-----	265	204	77.0
<u>Female*</u>			
All ages-----	623	474	76.1

\* The magnitude of the sampling error is too great to permit showing separate estimates by age for females.

Table 4. Average number of persons with hernias, average annual number of disability days associated with hernias, and number of disability days per person with a hernia per year *as reported in interviews* by sex and age: United States, July 1957-June 1959

[Data are based on household interviews of the civilian noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II. Detailed figures may not add to totals due to rounding]

Sex and age	Disability days associated with hernias				
	Number of persons with hernias (in thousands)	Restricted-activity days		Bed-disability days	
		Number (in thousands)	Per person with a hernia per year	Number (in thousands)	Per person with a hernia per year
<u>Both sexes</u>					
All ages-----	2,539	39,612	15.6	13,776	5.4
0-14-----	301	1,958	6.5	567	1.9
15-24-----	88	1,399	15.9	522	5.9
25-34-----	213	2,445	11.5	447	2.1
35-44-----	279	4,506	16.2	2,443	8.8
45-54-----	376	6,020	16.0	2,309	6.1
55-64-----	481	7,612	15.8	1,313	2.7
65-74-----	480	8,970	18.7	2,427	5.1
75+-----	321	6,701	20.9	3,749	11.7
<u>Male</u>					
All ages-----	1,916	25,748	13.4	8,967	4.7
0-14-----	222	1,584	7.1	430	1.9
15-24-----	64	978	15.3	477	7.5
25-34-----	134	725	5.4	263	2.0
35-44-----	196	3,116	15.9	1,706	8.7
45-54-----	272	2,922	10.7	1,445	5.3
55-64-----	372	5,447	14.6	893	2.4
65-74-----	392	5,787	14.8	1,013	2.6
75+-----	265	5,189	19.6	2,740	10.3
<u>Female*</u>					
All ages-----	623	13,864	22.3	4,809	7.7

\* The magnitude of the sampling error is too great to permit showing separate estimates by age for females.

Table 5. Average number of persons with hernias, average annual number of work-loss days associated with hernias, and number of work-loss days per person with a hernia per year for all persons and "usually working" persons 17 years of age and over as reported in interviews by sex and age: United States July 1957-June 1959

[Data are based on household interviews of the civilian noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II. Detailed figures may not add to totals due to rounding]

Sex and age	Number of persons with hernias		Work-loss days associated with hernias		Work-loss days per person with a hernia per year	
	All persons	"Usually working" persons	All persons	"Usually working" persons	All persons	"Usually working" persons
<u>Both sexes</u>		Average number in thousands				Days per person
All ages-17+	2,230	1,158	10,388	8,955	4.7	7.7
17-24-----	80	48	810	656	10.1	13.7
25-34-----	213	138	656	656	3.1	4.8
35-44-----	279	197	2,690	2,544	9.6	12.9
45-54-----	376	285	2,028	1,859	5.4	6.5
55-64-----	481	300	3,101	2,348	6.4	7.8
65-74-----	480	152	892	892	1.9	5.9
75+-----	321	39	212	-	0.7	-
<u>Male</u>						
All ages-17+	1,689	1,069	8,866	7,747	5.2	7.2
17-24-----	59	37	810	656	13.7	17.7
25-34-----	134	128	468	468	3.5	3.7
35-44-----	196	179	2,237	2,237	11.4	12.5
45-54-----	272	257	1,243	1,243	4.6	4.8
55-64-----	372	282	3,003	2,251	8.1	8.0
65-74-----	392	149	892	892	2.3	6.0
75+-----	265	38	212	-	0.8	-
<u>Female*</u>						
All ages-17+-----	541	88	1,523	1,208	2.8	13.7

\* The magnitude of the sampling error is too great to permit showing separate estimates by age for females.

Table 6. Average population used in obtaining rates shown in this publication by sex and age: United States, July 1957-June 1959

[Data are based on household interviews of the civilian noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II. Detailed figures may not add to totals due to rounding]

Age	Both sexes		Male		Female	
	All persons	"Usually working" persons <sup>1</sup>	All persons	"Usually working" persons <sup>1</sup>	All persons	"Usually working" persons <sup>1</sup>
Population in thousands						
All ages-----	169,835	59,393	82,633	41,672	87,202	17,721
0-14-----	53,303	...	27,181	...	26,122	...
15-24-----	21,523	6,975	10,052	3,950	11,471	3,025
25-34-----	22,558	13,422	10,783	9,974	11,776	3,448
35-44-----	23,021	14,833	11,072	10,570	11,949	4,263
45-54-----	19,833	13,083	9,675	9,036	10,157	4,047
55-64-----	14,930	8,369	7,183	6,047	7,747	2,322
65-74-----	9,698	2,312	4,530	1,774	5,167	538
75+-----	4,969	399	2,157	321	2,812	79

<sup>1</sup>"Usually working" persons are by definition limited to persons 17 years of age and over.

NOTE: For official population estimates for more general use, see Bureau of the Census reports on the civilian population of the United States, in Current Population Reports: Series P-20, P-25, P-50, P-57, and P-60.



## APPENDIX I

### TECHNICAL NOTES ON METHODS

#### **Background of This Report**

This report on Hernias is one of a series of statistical reports covering separate health-related topics which are prepared by the U.S. National Health Survey. The report is based on information collected in the continuing nationwide sample of households in the Health Interview Survey, which is a major part of the program.

The Health Interview Survey uses a questionnaire which, in addition to personal and demographic characteristics, elicits information on illnesses, injuries, chronic conditions, medical care, dental care, and hospitalization. As interview data relating to each of these various broad subject areas are tabulated and analyzed, separate reports are issued covering one or more specific topics. The present report contains data for 104 weeks of interviewing ending June 28, 1959.

The population covered by the sample for the Health Interview Survey is the civilian population living in the United States at the time of the household interview. Although the sample collection covers persons who are inmates of institutions, data for these persons are not included in the figures given in these reports. Also the sample does not include members of the Armed Forces, United States nationals living in foreign countries, and crews of vessels.

#### **Statistical Design of the Health Interview Survey**

**General plan.**—The sampling plan of the survey follows a multistage probability design which permits a continuous sampling of the civilian population of the United States. This plan utilizes the 1,900 Primary Sampling Units consisting of counties, groups of contiguous counties, and Standard Metropolitan Statistical Areas into which the country has been divided. The first stage of the design consists of drawing a sample from these Primary Sampling Units (PSU's). During the first 18 months of the Health Interview Survey the sample size was 372 PSU's. This was increased to 500 PSU's in January 1959. However, the basic sampling design and methods of estimating remained unchanged during the 2-year period covered by this report. The number of ratio estimating classes shown subsequently in this Appendix are those which applied to the first 18 months of the survey.

With no loss in general understanding, the remaining stages of the sampling can be telescoped and treated in this discussion as an ultimate stage. Within PSU's, then, ultimate stage units called segments are defined, also geographically, in such a manner that each segment contains an expected six households. Each week a random sample of about 120 segments is drawn. In the approximately 700 households in those segments, persons are interviewed concerning illnesses, injuries, chronic conditions, disability, and other factors related to health.

The household members interviewed each week are a representative sample of the population so that samples for successive weeks can be combined into larger samples for, say, a calendar quarter, a year, or more. Thus the design permits both continuous measurement of characteristics of high incidence or prevalence in the population and, through the larger consolidated samples, more detailed analysis of less common characteristics and smaller categories. The continuous collection has administrative and operational advantages as well as technical assets, since it permits field work to be handled with an experienced, stable staff.

**Sample size and geographic detail.**—The national sample plan during the 24-month period ending June 1959 included approximately 235,000 persons from 73,000 households in 12,200 segments. The over-all sample was designed in such fashion that tabulations can be provided for various geographic sections of the United States and for urban and rural sectors of the Nation.

**Collection of data.**—The field operations for the household survey are performed by the Bureau of the Census under specifications established by the Public Health Service. In accordance with these specifications the Bureau of the Census designs and selects the sample, conducts the field interviewing, and edits and codes the questionnaires. Tabulations are prepared by the Public Health Service using the Bureau of the Census electronic computers.

**Estimating methods.**—Each statistic produced by the survey is the result of two stages of ratio estimation. In the first of these, the factor is the ratio of the 1950 decennial U. S. total population count to the estimated population in 1950 of the U. S. National Health Survey's first-stage sample of PSU's. This factor is applied separately for more than 50 color-residence classes.

Later, ratios of sample-produced estimates of the population to official Bureau of the Census figures for current population in about 60 age-sex-color classes are computed, and serve as second-stage factors for ratio estimating.

The effect of the ratio estimating process is to make the sample more closely representative of the population by age, sex, color, and residence, thus reducing sampling variance.

As noted, each week's sample represents the population living during that week and characteristics of that population. Consolidation of samples over a time period such as a calendar quarter produces estimates of average characteristics of the United States population for that calendar quarter.

For prevalence statistics based on two years of data collection, figures are first calculated for each calendar quarter by averaging estimates for all weeks of interviewing in that quarter. Prevalence data based on eight quarters of interviewing are then obtained by averaging the eight quarterly figures.

For statistics measuring the number of occurrences during a specified time period, a similar computational procedure is used, but the statistics have a different interpretation. For the disability-day items, the interviewer asks for the respondent's experience over the two calendar weeks prior to the week of interview. Then, the estimated quarterly total for a statistic is simply 6.5 times the average two-week estimate produced by the 13 successive samples taken during the period. Thus, the experience of persons interviewed during a year—experience which actually occurred for each person in a two-calendar-week interval prior to week of interview—is treated in analysis as though it measured the total of such experience occurring in the year. For most statistics such interpretation leads to no significant bias. As noted earlier, the interviewing and estimation procedures are designed to reproduce the experience during the reference period of the questionnaire only for the population still living at the time of interview.

#### General Qualifications

Nonresponse.—Data are adjusted for nonresponse by a procedure which imputes to persons in a household not interviewed the characteristics of persons in households which were interviewed in the same segment. The total noninterview rate is 5 percent; 1 percent is refusal, and the remainder is accounted for by other reasons, such as failure to find any household respondent after repeated trials.

The interview process.—The statistics presented in this report are based on replies secured by interviewing members of the sampled households. Each person, 18 years and over, available at the time of interview, is interviewed individually. Proxy respondents within the household are employed for children and for adults who are not available at the time of the interview, provided the respondent is closely related to the person about whom information is being obtained.

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information the household respondent can, at best, pass on to the interviewer only the information the physician has given to the family. For conditions not medically attended, diagnostic information is often no more than a description of symptoms. However, other types of facts such as the number of disability days caused by the condition can be obtained more accurately from household members than from any other source.

Rounding of numbers.—The original tabulations on which data in this report are based show all estimates to the nearest whole unit. All consolidations are made from these original tabulations before the numbers are rounded to the nearest thousand for the published tables. Derived statistics such as rates and percent distributions are computed after the estimates have been rounded. Rounding to thousands has been done throughout this report even though, because of sampling error, the estimates may not be accurate to that detail.

Population figures.—Some of the published tables include population figures for specified categories. Except for certain over-all totals by age and sex (which are independently estimated), these figures are based on the sample of households in the U. S. National Health Survey. They are given primarily for the purpose of providing denominators for rate computation, and for this purpose are more appropriate for use with the accompanying measures of health characteristics than other population data which may be available. In some

instances they will permit users to recombine published data into classes more suitable to their specific needs. With the exception of the over-all totals by age and sex mentioned above, the population figures may in some cases differ from corresponding figures (which are derived from different sample surveys) published in reports of the Bureau of the Census. For population data for general use, see the official estimates presented in Bureau of the Census reports in the P-20, P-25, P-50, P-57, and P-60 series.

#### Reliability of Estimates

Since the estimates are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and interviewing personnel and procedures. As in any survey, the results are also subject to measurement error.

The standard error is primarily a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the standard error also reflects part of the variation which arises in the measurement process. It does not include estimates of any biases which might lie in the data. The chances are about 68 out of 100 that an estimate from the sample differs from the value obtained from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times as large.

In order to derive standard errors which are applicable to a wide variety of health statistics and which can be prepared at a moderate cost, a number of approximations are required. As a result, tables I through III, included in this Appendix should be interpreted as providing an estimate of the standard error rather than as the precise standard error for any specific statistic.

The following guides will enable the reader to determine sampling errors for the statistics presented in this report:

1. Approximate standard errors for estimates of the number of cases of a chronic condition, the number of disability days associated with a chronic condition, and the number of persons in a population group<sup>1</sup> are obtained from the appropriate columns of table I.
2. Approximate standard errors for percentage distributions of a chronic condition according to the number of bed-disability days or the extent of activity or mobility limitation associated with it are given in table II.
3. Approximate standard errors for prevalence estimates of a chronic condition per 1,000 persons in an age, sex, or color group or per 1,000 total population are obtained from table II. Since table II is set up for the estimation of the standard error of a rate per 100, the prevalence per 1,000 must first be converted to a percentage; table II is then entered with this percentage and the number of persons in the category (base of the percentage). The entry in the body of the table must then be multiplied by 10 to apply to the rate per 1,000 persons.

<sup>1</sup>The number of persons in an age, sex, or color group, or the total number of persons in the population is not subject to sampling error.

4. Approximate standard errors of percentage distributions of disability days associated with a chronic condition (not computed in this report) are given in table III.
5. A rough approximation of the standard errors for rates showing the average number of disability days per "persons with the condition<sup>2</sup> per year" is obtained by taking the square root of the sum of the square of the standard error of the numerator used in obtaining the rate divided by the numerator itself and the square of the standard error of the denominator used divided by the denominator itself, and then multiplying by the rate. This computation will normally give an overestimate of the true sampling error.

Example:

It is estimated that each "usually working" person with a hernia loses an average of 7.7 days from work during the year because of the hernia. The numerator of 8,955,000 days lost has a standard error of 1,150,000. The denominator of 1,158,000 persons has a standard error of 63,000. Using these numbers as shown below yields an answer of 1.1, the standard error of the estimated rate.

$$7.7 \sqrt{\left(\frac{1,150,000}{8,955,000}\right)^2 + \left(\frac{63,000}{1,158,000}\right)^2} = 1.1$$

<sup>2</sup>Note that where the rate refers to persons in a disease category, rule 5 applies, even if the group is further subdivided by age, sex, or color

Table I. Standard errors of estimates of aggregates

(All numbers shown in thousands)		
Size of estimate	Persons with hernias	Disability days
100-----	18	-
500-----	40	-
1,000-----	60	400
2,000-----	80	560
3,000-----	100	720
5,000-----	130	960
10,000-----	180	1,200
20,000-----	240	1,760
30,000-----	260	2,160
50,000-----	280	2,800
100,000-----	320	4,400
200,000-----	-	6,400
500,000-----	-	12,000
750,000-----	-	16,800
1,250,000-----	-	25,600

Illustration of use of table I.—The estimated number of persons under care for a hernia is 870,000. Since this is not given in the table, it is necessary to interpolate for the standard error. The standard error for an estimate of 1,000,000 is 60,000 and the standard error for an estimate of 500,000 is 40,000. Interpolation gives 55,000 as the standard error for 870,000.

Table II. Standard errors of percentages based on persons with a hernia

When the base of the percentage is: (in thousands)	For estimated percentages of				
	2 or 98	5 or 95	10 or 90	25 or 75	50
The approximate standard error (expressed in percentage points) is:					
100-----	2.9	4.5	5.4	7.8	10.3
500-----	1.3	2.0	2.4	3.5	4.6
1,000-----	0.9	1.4	1.7	2.5	3.3
2,000-----	0.6	1.0	1.2	1.8	2.3
3,000-----	0.6	0.8	1.0	1.4	1.9
5,000-----	0.4	0.6	0.8	1.1	1.4
10,000-----	0.3	0.5	0.6	0.8	1.0
20,000-----	0.2	0.3	0.4	0.6	0.7

Illustration of use of table II.—Of the 2,539,000 persons reported as having a hernia, 21.6 percent had one or more days of bed disability in the year. Since neither of these values can be read directly from the table, interpolation may be carried out as follows: for a base of 2,000,000 a statistic of 10 percent has a standard error of 1.2 percentage points and a statistic of 25 percent has a standard error of 1.8 percentage points. Interpolating, with a base of 2,000,000 an estimate of 21.6 percent would have a standard error of 1.7 percentage points. Corresponding calculations with a base of 3,000,000 produce a standard error of 1.3 percentage points. A final interpolation between these two results yields an estimate of 1.5 percentage points for a statistic of 21.6 percent with a base of 2,539,000. (Although interpolation has been carried out in two dimensions here to illustrate the use of the table, a simple scanning of the table will provide an approximate answer which will usually be sufficient.)

Table III. Standard errors of percentages based on disability days

When the base of the percentage is: (in thousands)	For estimated percentages of				
	2 or 98	5 or 95	10 or 90	25 or 75	50
The approximate standard error (expressed in percentage points) is:					
2,500-----	3.4	5.2	7.2	10.4	12.0
12,500-----	1.5	2.3	3.2	4.6	5.4
25,000-----	1.0	1.7	2.2	3.3	3.8
50,000-----	0.7	1.2	1.6	2.3	2.7
75,000-----	0.6	1.0	1.3	1.9	2.2
125,000-----	0.5	0.7	1.0	1.4	1.7
250,000-----	0.3	0.6	0.7	1.0	1.2
500,000-----	0.2	0.4	0.5	0.7	0.9

Illustration of use of table III.—Of the 39,612,000 restricted-activity days due to hernias, 15.2 percent were for persons 45-54 years of age. Since neither of these values can be read directly from the table, interpolation may be carried out as follows: with a base of 25,000,000 a statistic of 10 percent has a standard error of 2.2 percentage points and a statistic of 25 percent has a standard error of 3.3 percentage points. Interpolating, a statistic of 15.2 percent with a base of 25,000,000 would have a standard error of 2.6 percentage points. Corresponding calculations with a base of 50,000,000 produce a standard error of 1.8 percentage points. A final interpolation between these two results yields a standard error of 2.1 percentage points for a statistic of 15.2 percent with a base of 39,612,000. (Although interpolation has been carried out in two dimensions here to illustrate the use of the table, a simple scanning of the table will provide an approximate answer which will be sufficient for most purposes.)

## APPENDIX II

### DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

#### **Terms Relating to Chronic Conditions**

**Condition.**—A condition is defined by an entry on the questionnaire which describes a departure from a state of physical or mental well-being. In the coding and tabulating process, conditions are first classified according to the type of disease, injury or impairment, or symptom and then according to a number of other criteria such as whether they were medically attended, whether they resulted in disability, and whether they were acute or chronic. For the purposes of each published report or set of tables, only those conditions recorded on the questionnaire which satisfy certain stated criteria are included.

Conditions, except impairments, are coded by type according to the International Classification of Diseases, 1955 Revision, with certain modifications adopted to make the coding procedure more suitable for a household interview survey. Impairments, defined as chronic or permanent defects resulting from disease, injury, or congenital malformation, are coded according to a special supplementary classification which permits the classification of impairments by type of functional disability and etiology.

**Chronic condition.**—A condition is considered to be chronic if it is described by the respondent (1) in terms of one of the conditions on the "Check List of Chronic Conditions" or in terms of one of the impairments on the "Check List of Impairments" (Cards A and B, Appendix III), or (2) as having been first noticed more than three months before the interview. For this purpose, first noticed is defined as the time at which the person first felt sick or when he or his family was first told by a physician that he had a disease of which he was previously unaware. For a condition which is episodic in nature, the onset is always considered to be the original onset rather than the onset of the most recent episode.

**Prevalence of a condition.**—In general, the prevalence of a condition is the estimated number of cases existing in a population at a specific point in time or the average number existing during a specified period of time.

In the National Health Survey, the prevalence of a chronic condition is the number of cases reported to be present at the time of the interview or at any time during the 12 months prior to the interview. Estimates of the prevalence of chronic conditions may be restricted to cases which satisfy certain additional criteria. For example, only cases involving a day or more in bed during the past year or cases under care may be included.

**Medically attended condition.**—A condition is considered to be medically attended if a physician has been consulted about it either at its onset or at any time thereafter. Medical attention includes consultation either in person or by telephone for treatment or advice. Advice from the physician transmitted to the patient through the nurse is counted as well as visits to physicians in clinics or hospitals. If during the course of a single visit the physician is consulted about more than one

condition for each of several patients, each condition of each patient is counted as medically attended.

Discussions of a child's condition by the physician and a responsible member of the household are considered as medical attention even if the child was not seen at that time.

For the purpose of this definition, the term "physician" includes doctors of medicine and osteopathic physicians.

**Condition under care.**—By under care is meant one or more of the following: (1) currently taking medicine or treatment prescribed by a physician, (2) observing a systematic course of diet or activity prescribed by a physician, (3) visiting the physician regularly for checking on the condition, or (4) under instruction from the physician to return if some particular thing happens.

Physician is again defined as a doctor of medicine or an osteopathic physician.

#### **Terms Relating to Disability**

**Disability.**—Disability is the general term used to describe a long-term or a temporary reduction of a person's activity as a result of a chronic condition.

#### **Long-Term Disability**

**Chronic activity limitation.**—Chronic activity limitation is ascertained for all persons with one or more chronic conditions. These persons are divided into 4 categories according to the extent to which their activities are limited as a result of the conditions (Cards C, D, E, and F, Appendix III). For the purpose of this report, categories 2 and 3 have been combined.

Since the major activities of preschool children, school-age children, housewives, and workers and other persons differ, a different set of criteria is used to determine the amount of reduction of major activities for each group. However, there is a general similarity between the criteria as will be seen in the descriptions of the categories below.

**Major limitation of activity.**—Inability to carry on major activity of the group:

Preschool children:	inability to take part in ordinary play with other children
---------------------	---

School-age children:	inability to go to school
Housewives:	inability to do any housework

Workers and all other persons:	inability to work at a job or business
--------------------------------	--

**Partial limitation of activity.**—Limitation of amount or kind of participation in major activity of the group:

Preschool children:	limited in the amount or kind of play with other children
---------------------	---

School-age children:	limited to certain types of schools or in school attendance; limited in participation in athletics or other extracurricular activities	<u>Restricted-activity day.</u> —A day on which because of a specific illness or injury a person substantially reduces the amount of activity normal for that day. The type of reduction will vary with the age and occupation of the individual as well as with the day of the week or the season. Restricted activity thus covers a range from substantial reduction of normal activity to complete inactivity.
Housewives:	limited in amount or kind of housework or limited in recreational or community activities	<u>Bed-disability day.</u> —A day on which more than half the daylight hours were spent in bed because of a specific illness or injury. All hospital days for inpatients are considered to be days of bed disability even if the patient was not actually in bed at the hospital.
Workers and all other persons:	limited in amount of work or kind of employment or limited in recreational or community activities	<u>Work-loss day.</u> —A normal working day on which a person did not work at his job or business because of a specific illness or injury. The number of days lost from work is determined only for persons 17 years of age or older.
<u>No limitation of activity.</u> —No limitation as described above.		

#### Temporary Disability

Disability days.—Disability days are classified according to whether they are days of restricted activity, days in bed, days in the hospital, days lost from work, or days lost from school. All hospital days are, by definition, days of bed disability; all days of bed disability are, by definition, days of restricted activity. The converse form of these statements is, of course, not true. Days lost from work and days lost from school are also days of restricted activity for the working and school-age populations. Hence, restricted activity is the most inclusive term used in describing disability days.

#### Demographic Terms

Age.—The age of the person on his last birthday recorded on the questionnaire in single years. Ages are then grouped in intervals suitable for the topic under discussion.

Usually working.—A term applied to an individual 17 years of age or older who was gainfully employed as a paid employee, a self-employed person, or as a worker in a family business for more than half of the 12 months prior to the interview. A person who does only volunteer or unpaid work—such as work in his own home or work for the church or community—is not considered to be gainfully employed.

## APPENDIX III

### QUESTIONNAIRE

The items below show the exact content and wording of the questionnaire used in the household survey. The actual questionnaire is designed for a household as a unit and includes additional spaces for reports on more than one person.

<b>CONFIDENTIAL:</b> The National Health Survey is authorized by Public Law 652 of the 84th Congress (70 Stat 489; 42 U.S.C. 305). All information which would permit identification of the individual will be held strictly confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any other purpose (22 FR 1687).											
Form NHIS-2 (A-18-58)	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS Acting as Collecting Agent for the U.S. PUBLIC HEALTH SERVICE	1. Questionnaire  of  Questionnaires									
NATIONAL HEALTH SURVEY											
2. (a) Address or description of location  _____ _____ _____		3. Ident. Code 4. Sub-sample weight 5. Sample 6. PSU Number 7. Segment No. 8. Serial No.									
(b) Type of living quarters: <input type="checkbox"/> Dwelling unit <input type="checkbox"/> Other  9. Is this house on a farm or ranch? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No		10. What is the telephone number here?  11. What is the best time to call?  <input type="checkbox"/> No phone									
12. Are there any other living quarters, occupied or vacant, in this building (apartment)? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No  Ask about all units except apartment houses 13. Is there any other building on this property for people to live in - either occupied or vacant? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No		14. Does anyone else living in this building use YOUR ENTRANCE to get to his living quarters? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No									
INSTRUCTIONS  If "Yes" to questions 12, 13 or 14 apply definition of a dwelling unit to determine whether one or more additional questionnaires should be filled and whether the listing is to be corrected.											
15. RECORD OF CALLS AT HOUSEHOLDS											
Item	1	Com.	2	Com.	3	Com.	4	Com.	5	Com.	
Entire household	Date Time	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Callbacks for individual respondents	Date Col. No. Time	-----	-----	-----	-----	-----	-----	-----	-----	-----	
16. REASON FOR NON-INTERVIEW											
TYPE:	A	B	C	Z							
Reason:	<input type="checkbox"/> Refusal <input type="checkbox"/> No one at home - repeated calls <input type="checkbox"/> Temporarily absent <input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Vacant - non-seasonal <input type="checkbox"/> Vacant - seasonal <input type="checkbox"/> Usual residence elsewhere <input type="checkbox"/> Armed Forces <input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Demolished <input type="checkbox"/> In sample by mistake <input type="checkbox"/> Eliminated in sub-sample <input type="checkbox"/> Other (Specify)	Interview not obtained for:  Clos. because:							
	Comments on non-interview										
	17. Signature of interviewer				18. Code						
	Special instructions or notes										
	1. (a) What is the name of the head of this household? (Enter name in first column) (b) What are the names of all other persons who live here? (List all persons who usually live here and all persons staying here who have no usual place of residence elsewhere. List these persons in the prescribed order.) (c) Do any (other) lodgers or roomers live here? <input type="checkbox"/> No <input type="checkbox"/> Yes (List) → (d) Is there anyone else who lives here who is now away on business? On a visit? Temporarily in a hospital? (e) Is there anyone else staying here now? <input type="checkbox"/> No <input type="checkbox"/> Yes (List) → (f) Do any of these people have a home elsewhere? <input type="checkbox"/> No (Leave on questionnaire) <input type="checkbox"/> Yes (If not a household member, delete)					Last name (I)					
2. How are you related to the head of the household? (Enter relationship to head; for example: head, wife, daughter, grandson, mother-in-law, partner, lodger, lodger's wife, etc.)					First name and initial						
3. How old were you on your last birthday?					Age <input type="checkbox"/> Under 1 year  <input type="checkbox"/> White <input type="checkbox"/> Negro  <input type="checkbox"/> Male <input type="checkbox"/> Female						
4. Race (Check one box for each person)					(State or foreign country)						
5. Sex (Check one box for each person)					Relationship Head  <input type="checkbox"/> Under 1 year  <input type="checkbox"/> White <input type="checkbox"/> Negro  <input type="checkbox"/> Male <input type="checkbox"/> Female						
6. Where were you born? (Record state or foreign country)					Relationship Head  <input type="checkbox"/> Under 1 year  <input type="checkbox"/> White <input type="checkbox"/> Negro  <input type="checkbox"/> Male <input type="checkbox"/> Female						
7. Are you now married, widowed, divorced, separated or never married? (Check one box for each person)					Relationship Head  <input type="checkbox"/> Under 1 year  <input type="checkbox"/> White <input type="checkbox"/> Negro  <input type="checkbox"/> Male <input type="checkbox"/> Female  <input type="checkbox"/> Never married						
If 14 years old or over, ask:					Relationship Head  <input type="checkbox"/> Under 1 year  <input type="checkbox"/> White <input type="checkbox"/> Negro  <input type="checkbox"/> Male <input type="checkbox"/> Female  <input type="checkbox"/> Never married						
8. What is the highest grade you completed in school? (Circle highest grade completed or check "None")					Relationship Head  <input type="checkbox"/> None <input type="checkbox"/> Under 14 years Elem: 1 2 3 4 5 6 7 8 High: 1 2 3 4 College: 1 2 3 4 5+						

<p>If Male and 14 years old or over, ask:</p> <p>9. (a) Did you ever serve in the Armed Forces of the United States?      If "Yes," ask:      (b) Are you now in the Armed Forces, not counting the reserves?      If "Yes," delete this person from questionnaire.</p>		<input type="checkbox"/> Fem. or und. 14 yrs. <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> War <input type="checkbox"/> Peace-time only <input type="checkbox"/> Spanish American <input type="checkbox"/> WW-II <input type="checkbox"/> WW-I <input type="checkbox"/> Korean <input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>(c) Was any of your service during a war or was it peace-time only?      If "War," ask:      (d) During which war did you serve?      If "Peace-time" only, ask:      (e) Was any of your service between June 27, 1950 and January 31, 1955?</p>			
<p>If 6 years old or over, ask:</p> <p>10. (a) What were you doing most of the past 12 months --      (For males over 16): working, looking for work, or doing something else?      (For females over 16): working, looking for work, keeping house, or doing something else?      (For children 6-16): going to school or doing something else?</p>		<input type="checkbox"/> Under 6 years <input type="checkbox"/> Working <input type="checkbox"/> Looking for work <input type="checkbox"/> Keeping house <input type="checkbox"/> Going to school <input type="checkbox"/> Something else <input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>If "Something else" checked, and person is 10 years old or over, ask:      (b) Are you retired?</p>			
R	Interview each adult person for himself for questions 11-25 and Tables I, II, and A, if he is at home. Enter column number of respondent in each column.		<input type="checkbox"/> Responded for self Col. No. _____ was respondent
We are interested in all kinds of illnesses, whether serious or not --		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>11. Were you sick at any time LAST WEEK OR THE WEEK BEFORE?</p> <p>(a) What was the matter?      (b) Anything else?</p>			
<p>12. Last week or the week before did you have any accidents or injuries, either at home or away from home?</p> <p>(a) What were they?      (b) Anything else?</p>		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>13. Did you feel any ill effects last week or the week before from an accident or injury that happened before that time?</p> <p>(a) What were these effects?      (b) Anything else?</p>		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>14. Last week or the week before did you take any medicine or treatment for any condition (besides . . . which you told me about)?</p> <p>(a) For what conditions?      (b) Anything else?</p>		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>15. AT THE PRESENT TIME do you have any ailments or conditions that have lasted for a long time? (If "No"*) Even though they don't bother you all the time?</p> <p>(a) What are they?      (b) Anything else?</p>		<input type="checkbox"/> Yes <input type="checkbox"/> No	

Table I - ILLNESSES, IMPAIRMENTS AND ACCIDENTS											
Line number Col. No. of per- son	Ques- tion No.	Did you ever talk to a doctor about ...?	What did the doctor say it was? ---did he use any medical terms?  (If doctor not talked to = "No" in col. (c) - record respon- dent's description)  (If ill-effects of earlier accident, record ill-effects. and also fill Table A)	If an impairment or symptom or a condition (from q. 13 or q. 17, ask:  What was the cause of...?	If eye trouble of any kind and 6 yrs. old or over; ask:  (If accident or injury, also fill Table A)	Ask only for:  allergy      asthma anemia      rheumatism arthritis      stroke tumor (or cysts)  OR  Any entry in col. (d-1) or (d-2) of: trouble      condition disease      coupled coupled with  Can you read ordi- nary news- paper print with glasses?	What kind of trouble is it?  What part of the body is affected?  Show in following detail for members listed below: Head - (Skull, scalp or face) Spine - (Upper, middle or lower) back Arm - (Shoulder, upper, elbow, lower, wrist, hand) Leg - (Hip, upper, knee, lower, ankle, foot)  ALSO If arm, leg, eye, or ear, state whether ONE or BOTH,	LAST WEEK OR THE WEEK BE- FORE did ... cause you to cut down on your usual activities for as much as a day?	How many days, includ- ing the 2 week- ends?	Check one No      Yes	
											(a)
1		<input type="checkbox"/> Yes <input type="checkbox"/> No			X	<input type="checkbox"/> Yes <input type="checkbox"/> No		X		X	

Table II - HOSPITALIZATION DURING PAST 12 MONTHS											
Line number Col. No. of per- son	Ques- tion No.	When did you enter the hos- pital? (Month, Year)	How many days were you in the hospital, not count- ing the day you left?	To Interviewer  How many of these days were in the past 12 months?	How many of these days were in the past 2 weeks?	Was this person still in the hospital on Sunday night?	What did they say at the hospital the condition was --  (If "they" didn't say, ask):  What did the last doctor you talked to say it was?  (Show same detail as in cols. (d-1)-(d-5) of T.I.)  (If condition from accident or injury, fill Table A)	Were any operations performed on you during this stay at the hospital?  (a) What was the name of the operation? (b) Any other operations?	(i)	Days	(j)
1		Mo: _____ Yr: _____ Days	All or Days			<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Yes <input type="checkbox"/> No		

TABLE A (Accidents and Injuries)											
Line No. from Table I	1. What part of the body was hurt? What kind of injury was it? Anything else?										<input type="checkbox"/> Accident happened during past 2 weeks
2.	2. When did it happen? Year: _____ (Enter month also if the year is 1957 or 1958) Month: _____										<input type="checkbox"/> Accident happened during past 2 weeks
3.	3. Where did the accident happen?  <input type="checkbox"/> At home (inside or outside the house) (own home or someone else's) <input type="checkbox"/> While in Armed Services <input type="checkbox"/> Some other place										
4.	4. Was a car, truck, bus or other motor vehicle involved in the accident in any way?  <input type="checkbox"/> Yes <input type="checkbox"/> No										
5.	5. Were you at work or business when the accident happened?  <input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Under 14 years at time of accident										

16. Has anyone in the family - you, your--, etc. - had any of these conditions DURING THE PAST 12 MONTHS? (Read Card A, condition by condition; record any conditions mentioned in the column for the person)		<input type="checkbox"/> Yes <input type="checkbox"/> No
17. Does anyone in the family have any of these conditions? (Read Card B, condition by condition; record any conditions mentioned in the column for the person)		<input type="checkbox"/> Yes <input type="checkbox"/> No
18. (a) LAST WEEK OR THE WEEK BEFORE did anyone in the family - you, your--, etc., talk to a doctor or go to a doctor's office or clinic? Anyone else? If "Yes" (b) How many times during the past 2 weeks? (c) Where did you talk to the doctor? (d) How many times at -- (home, office, clinic, etc.)? (Record total number of times for each type of place) (*Hospital clinic* excludes overnight stays)		<input type="checkbox"/> Yes <input type="checkbox"/> No  No. of times  Place      Times At home ..... At office ..... Hospital clinic ..... Company or industry ..... Over telephone ..... Other (Specify) .....
19. (a) Last week or the week before did anyone in the family go to a dentist? Anyone else? If "Yes" (b) How many times during the past 2 weeks?		<input type="checkbox"/> Yes <input type="checkbox"/> No  No. of times
20. How many times altogether in the past 12 months did you go to a dentist?		<input type="checkbox"/> One <input type="checkbox"/> Three <input type="checkbox"/> Two <input type="checkbox"/> Four or more <input type="checkbox"/> None
21. (a) DURING THE PAST 12 MONTHS has anyone in the family been a patient in a hospital overnight or longer? If "Yes" (b) How many times were you in the hospital?		<input type="checkbox"/> Yes (Table II) <input type="checkbox"/> No  No. of times
22. (a) During the past 12 months has anyone in the family been a patient in a nursing home or sanitarium? If "Yes" (b) How many times were you in a nursing home or sanitarium?		<input type="checkbox"/> Yes (Table II) <input type="checkbox"/> No  No. of times
25. During the past 12 months in which group did the total income of your family fall, that is, yours', your--', etc.? (Show Card II). Include income from all sources, such as wages, salaries, rents from property, pensions, help from relatives, etc.		Group No.

Table I - ILLNESSES, IMPAIRMENTS AND ACCIDENTS

How many of these -- days were you in bed all or most of the day?	If 6 years old or over, ask:		Did you first notice ... DURING THE PAST 3 MONTHS or before that time?		To interviewer:	Did you first notice ... DURING THE PAST 12 MONTHS or before that time?	How long since you last talked to a doctor about...?	Do you still take any medicine or treatment that the doctor prescribed for...?	About how many days during the past 12 months, has... kept you in bed for all or most of the day?	Ask after completing last condition for each person:						
	If "Yes" in col. (i);	How many days did ... keep you from work (going to school)?	Check one	Did ... start during the past 2 weeks or before that time?						If col. (k) is checked, or the condition is on either one of Cards A or B, continue; otherwise STOP	Please look at this card and read each statement. Then tell me which statement fits you best. (Show Cards C-F, as appropriate)	If 1, 2 or 3 in col. (r); in col. (s) ask:	If "Yes" or "No" in col. (t) ask:	Please look at this card and read each statement. Then tell me which statement fits you best. (Show Cards C-F, as appropriate)	If 1, 2 or 3 in col. (r); in col. (s) ask:	If "Yes" or "No" in col. (t) ask:
	Days or None	Days or None	Before col. (m)	During 3 months						(If during past 2 weeks, ask): Which week, last week or the week before?	(If during past 12 months, ask): Which month?	(If less than one month, enter "Und." for "Mo.")	(If less than one month, enter "Und." for "Mo.")	(If less than one month, enter "Und." for "Mo.")	(If less than one month, enter "Und." for "Mo.")	(If less than one month, enter "Und." for "Mo.")
(h)	(i)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)				
— Days or None	<input type="checkbox"/> Yes <input type="checkbox"/> No	— Days or None		<input type="checkbox"/> Last week <input type="checkbox"/> Week before <input type="checkbox"/> Before 2 wks.	No. _____ Y. _____ Before Blnk	<input type="checkbox"/> Yes, <input type="checkbox"/> No <input type="checkbox"/> No Dr.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Dr.	— Days or None	<input type="checkbox"/> Yes <input type="checkbox"/> No	— Days or None	<input type="checkbox"/> Yes <input type="checkbox"/> No	Line number				

Table II - HOSPITALIZATION DURING PAST 12 MONTHS

What is the name and address of the hospital you were in? (Enter name, city or county and State)		For completed hospitalizations only:					
(i)		(j)	(k)	(l)	(m)	(n)	(o)
		<input type="checkbox"/> Yes (Skip to col. n)	<input type="checkbox"/> Yes (Skip to col. n)	<input type="checkbox"/> Yes	<input type="checkbox"/> Under ½	<input type="checkbox"/> Family member(s)	<input type="checkbox"/> Other (Specify) _____
		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No (Stop)	<input type="checkbox"/> ½ up to ¾	<input type="checkbox"/> Employer	
					<input type="checkbox"/> ¾ or more	<input type="checkbox"/> Union, clubs, etc.	

## FOOTNOTES AND COMMENTS

<p><b>Card A</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>Check List of Chronic Conditions</b></p> <ul style="list-style-type: none"> <li>1. Asthma or hay fever</li> <li>2. Tuberculosis</li> <li>3. Chronic bronchitis</li> <li>4. Repeated attacks of sinus trouble</li> <li>5. Rheumatic fever</li> <li>6. Hardening of the arteries</li> <li>7. High blood pressure</li> <li>8. Heart trouble</li> <li>9. Stroke</li> <li>10. Trouble with varicose veins</li> <li>11. Hemorrhoids or piles</li> <li>12. Chronic gallbladder or liver trouble</li> <li>13. Stomach ulcer</li> <li>14. Any other chronic stomach trouble</li> <li>15. Kidney stones or chronic kidney trouble</li> <li>16. Arthritis or rheumatism</li> <li>17. Prostate trouble</li> <li>18. Diabetes</li> <li>19. Thyroid trouble or goiter</li> <li>20. Any allergy</li> <li>21. Epilepsy</li> <li>22. Mental or nervous trouble</li> <li>23. Tumor or cancer, cyst or growth</li> <li>24. Chronic skin trouble</li> <li>25. Hernia or rupture</li> </ul>	<p><b>Card C</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>For:</b></p> <p>Workers and other persons except Housewives and Children</p> <ul style="list-style-type: none"> <li>1. Cannot work at all at present.</li> <li>2. Can work but limited in amount or kind of work.</li> <li>3. Can work but limited in kind or amount of outside activities.</li> <li>4. Not limited in any of these ways.</li> </ul>	<p><b>Card E</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>For:</b></p> <p>Children from 6 years old and others going to school</p> <ul style="list-style-type: none"> <li>1. Cannot go to school at all at present time.</li> <li>2. Can go to school but limited to certain types of schools or in school attendance.</li> <li>3. Can go to school but limited in other activities.</li> <li>4. Not limited in any of these ways.</li> </ul>	<p><b>Card G</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>For:</b></p> <p>Children from 6 years old and others going to school</p> <ul style="list-style-type: none"> <li>1. Confined to the house all the time, except in emergencies.</li> <li>2. Can go outside but need the help of another person in getting around outside.</li> <li>3. Can go outside alone but have trouble in getting around freely.</li> <li>4. Not limited in any of these ways.</li> </ul>
<p><b>Card B</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>Check List of Selected Impairments</b></p> <ul style="list-style-type: none"> <li>1. Deafness or serious trouble with hearing</li> <li>2. Serious trouble with seeing, even with glasses</li> <li>3. Condition present since birth, such as cleft palate or club foot</li> <li>4. Stammering or other trouble with speech</li> <li>5. Missing fingers, hand, or arm</li> <li>6. Missing toes, foot, or leg</li> <li>7. Cerebral palsy</li> <li>B. Paralysis of any kind</li> <li>9. Repeated trouble with back or spine</li> <li>10. Any permanent stiffness or deformity of the foot, leg, fingers, arm or back</li> </ul>	<p><b>Card D</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>For:</b></p> <p>Housewife</p>	<p><b>Card F</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>For:</b></p> <p>Children under 6 years old</p>	<p><b>Card H</b></p> <p>NATIONAL HEALTH SURVEY</p> <p><b>For:</b></p> <p>Family income during past 12 months</p> <ul style="list-style-type: none"> <li>1. Under \$500 (including loss)</li> <li>2. \$500 - \$999</li> <li>3. \$1,000 - \$1,999</li> <li>4. \$2,000 - \$2,999</li> <li>5. \$3,000 - \$3,999</li> <li>6. \$4,000 - \$4,999</li> <li>7. \$5,000 - \$6,999</li> <li>8. \$7,000 - \$9,999</li> <li>9. \$10,000 and over</li> </ul>





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U. S. National Health Survey.  
Hernias reported in Interviews, United States, July 1957-June 1959; statistics on prevalence of hernias and associated disability by age, sex, and medical care status. Based on data collected in household interviews during the period July 1957-June 1959. Washington, U. S. Dept. of Health, Education, and Welfare, Public Health Service, 1960.  
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